United States Department of Agriculture | **Forest Service** | **Forest Health Protection** | **2550 Riverside Drive Susanville, CA 96130 (530) 257-2151 Voice (530) 252-6624 TTY (530) 252-6428 Fax**

Fill Code: 3420

Date: March 29, 2021

To: District Ranger, Feather River Ranger District, Plumas National Forest.

Subject: Use of hazard tree and fire-injured tree marking guidelines for Feather Falls project, Feather River Ranger District, Plumas National Forest

The Feather Falls project area was burned over by the 2020 Bear Fire (North Complex) resulting in widespread tree mortality. In addition, some trees not directly killed by the fire sustained various levels of fire injury to roots, bole and crowns. Initially surviving trees that sustained higher levels of injury are at a high probability of delayed mortality and/or may now have structural defects that increase their failure potential. When such trees are located near campgrounds, trails, and roads, they pose a significant hazard to people and property.

The district is proposing to abate hazardous trees and salvage dead and dying trees within the project area.

- *Hazard tree abatement along Feather Falls Trail* located within the Bald Rock Inventoried Roadless Area (IRA). This project proposes felling of hazard trees, removing by helicopter to process and deck, treating of slash to protect soils and facilitate decomposition.
- *Salvage logging to remove fuels hazards, site prep for reforestation, and recover economic value* around recreation facilities outside IRA. This project proposes to treat no more than 250 acres using conventional or mechanical tractor logging practices.

Hazardous trees are those that are structurally compromised, including all dead trees, and/or are predicted to die because of severe fire-injuries and are within striking distance of people and property. This includes parking areas, campsites, roads, and trails. Salvaging trees over a larger area that are dead or are predicted to die is also proposed to capture economic value of timber. Removing dead and dying trees can also minimize course woody debris accumulation that could cause significant damage to soil and vegetation, including planted conifers, during future wildfire, and provide for safety of crews performing restoration activities (planting, erosion control, weed abatement, etc.). To accomplish these goals, the district will use the following Forest Health Protection guidelines:

Smith, S.L. and D.R. Cluck. 2011. *Marking guidelines for fire-injured trees in California*. US Forest Service, Forest Health Protection, Region 5, Susanville, CA. Report # RO-11-01. 13 p.

Angwin, P.A., D.R. Cluck, P.J. Zambino, B.W. Oblinger and W.C. Woodruff. 2012. *Hazard Tree Guidelines For Forest Service Facilities and Roads in the Pacific Southwest Region*. US Forest Service, Forest Health Protection, Region 5, Vallejo, CA. Report # RO-12-01. 40 p.

Recent supplements have been added to both documents and should be incorporated into project planning and implementation. These have been provided to the Feather River Ranger District.

- *Catastrophic Hazard Tree Removal Addendum 9-16-2020*
- *Failure Zone Addendum 9-16-2020*
- *Recommendations for extended post-fire designation by damage tree selection (2021)*

The use of the R5 Hazard Tree Guidelines and R5 Fire-Injured Tree Marking Guidelines, including all addenda, is appropriate for all proposed hazard tree and salvage objectives and fully supported by Forest Health Protection.

Treatment of cut stumps to prevent Heterobasidion root disease

Fresh cut stumps of fire-injured trees can provide entry courts for Heterobasidion root disease (*Heterobasidion occidentale and H. irregulare*). Stumps of trees killed by fire that have been dead less than 18 months should also be considered susceptible. However, preventative treatment of stumps with a borate compound in high burn severity harvest areas where no green trees remain may not be necessary as these types of areas pose little risk to establishing new root disease centers. An exception to this is when high burn severity areas overlap with campgrounds and associated high-use locations such as parking lots, restrooms, and trailhead information kiosks. In these areas, where there is little tolerance for root disease presence, it is recommended that a registered borate compound be applied to all freshly cut conifer stumps >3" in diameter to further reduce the chance of creating new infection centers.

If you have any additional questions regarding this report and/or need additional information please contact me at 530-708-2770 or at danny.cluck@usda.gov

/s/ Danny Cluck

Daniel R. Cluck
Forest Entomologist

Cc: Will Brendecke, Clay Davis, Eric Murphy, Ryan Davy, Bill Woodruff

References:

Smith, S.L. and D.R. Cluck. 2011. *Marking guidelines for fire-injured trees in California*. US Forest Service, Forest Health Protection, Region 5, Susanville, CA. Report # RO-11-01. 13 p.

Angwin, P.A., D.R. Cluck, P.J. Zambino, B.W. Oblinger and W.C. Woodruff. 2012. *Hazard Tree Guidelines For Forest Service Facilities and Roads in the Pacific Southwest Region*. US Forest Service, Forest Health Protection, Region 5, Vallejo, CA. Report # RO-12-01. 40 p.